Amendments to the Claims

The listing of claims will replace all prior versions and listings of claims in the application.

1. (currently amended) A method for identifying a compound that selectively induces conformational changes in viral envelope proteins ~~that result in loss of function by envelope structures necessary for virus entry~~, comprising:

providing a membrane bound viral envelope protein or membrane bound fragment thereof, wherein said envelope protein or fragment thereof is from respiratory syncytial virus (RSV), parainfluenza virus type 3 (HPIV-3), a human influenza virus, measles virus, hepatitis B virus (HBV), hepatitis C virus (HCV), or a retrovirus,

contacting said ~~membrane bound viral~~ envelope protein or ~~membrane bound~~ fragment thereof with a candidate compound in the absence of cellular receptors or fragments thereof; and

~~measuring the ability of said candidate compound to induce conformational changes in said membrane bound viral envelope protein or fragment thereof by~~ determining the binding of an antibody, fragment thereof, ~~or peptide~~ to said ~~membrane bound viral~~ envelope protein or fragment thereof, thereby identifying a compound that selectively induces conformational changes in viral envelope proteins.

2. (currently amended) The method of claim 1, wherein said ~~virus is~~ envelope protein or fragment thereof is from a retrovirus.

3. (currently amended) The method of claim 1, wherein said ~~virus is HIV~~ envelope protein or fragment thereof is from HIV-1.

4. (currently amended) The method of claim 1, wherein said antibody or antibody fragment preferentially binds an epitope that is present in a structure or conformation formed during viral entry, and a compound that selectively induces conformational changes in viral envelope proteins is identified by an increase in the binding of said antibody or antibody fragment.~~wherein the ability of said candidate compound to induce conformational changes in a viral envelope glycoprotein or fragments thereof is measured by determining the binding of an antibody or fragment thereof to the induced conformations.~~

5. (canceled)

6. (currently amended) The method of claim 1 ~~claim 4~~, wherein [[the]] said antibody or antibody fragment preferentially binds an epitope present only prior to induction, and a compound that selectively induces conformational changes in viral envelope proteins is identified by a decrease in the binding of said antibody or antibody fragment.~~thereof used to measure the ability of said candidate compound to induce conformational changes in viral envelope glycoprotein or fragments thereof comprise is selected from the group consisting of single chain, light chain, heavy chain, CDR, F(ab')2, Fab, Fab', Fv, sFv and dsFv or any combination thereof.~~

7. (currently amended) The method of claim 1, wherein said antibody or antibody fragment is selected from the group consisting of single chain, light chain, heavy chain, CDR, F(ab')2, Fab, Fab', Fv, sFv and dsFv or any combination thereof ~~wherein the ability of said candidate compound to induce conformational changes in a viral envelope glycoprotein or fragments thereof is measured by determining the binding of a peptide to a confirmation of said viral envelope protein which confirmation is induced by the binding of said candidate compound~~.

8. (currently amended) The method of claim 1, wherein said antibody, fragment thereof, ~~or peptide~~ is labeled with a labeling agent.

9. (previously presented)The method of claim 8, wherein said labeling agent is an enzyme, fluorescent substance, chemiluminescent substance, horseradish peroxidase, alkaline phosphatase, biotin, avidin, electron dense substance, radioisotope, or combination thereof.

Claims 10-14. (canceled)

15. (currently amended) The method of claim 1 ~~claim 14~~, wherein said determining comprises ~~measuring comprises:~~

~~(a) adding one or more labeled antibodies that preferentially bind an epitope that is present in a conformation or structure formed during virus entry; and~~

~~(b)~~ measuring the amount of antibody or antibody fragment binding.

16. (currently amended) The method of claim 15, further comprising: comparing the measured amount of antibody or antibody fragment binding to a standard value.

17. (currently amended) The method of claim 16, wherein said measuring the amount of antibody or antibody fragment binding is performed by immunoprecipitation analysis, flow cytometry, fluorescence microscopy, fluorimetry, enzyme immunoassay, radiolabeling, or a chemiluminescence techniques.

18. (currently amended) The method of claim 15 ~~claim 17~~, wherein said measuring the amount of antibody or antibody fragment binding is performed by incubating ~~said~~ bound antibody or bound antibody fragment with a europium-labeled anti-rabbit secondary antibody, and detecting said secondary antibody with time resolved fluorescence.

19-20. (canceled)

21. (currently amended) A method for identifying a compound that selectively induces conformational changes ~~function impairing changes~~ in viral envelope proteins ~~that result in loss of function by envelope structures necessary for HIV-1 virus entry~~ comprising:

providing membrane bound HIV-1 envelope proteins gp120/gp41 or membrane bound fragments thereof;

contacting said ~~membrane bound~~ HIV-1 envelope proteins gp120/gp41 or fragments thereof with a candidate compound in the absence of cellular receptors or fragments thereof; and

~~measuring~~ determining the ability of said candidate compound to induce conformational changes that result in the formation of entry structures in gp41.

22. (currently amended) The method of claim 21, wherein said ~~measuring~~ determining step is performed by:

adding ~~one or more antibodies~~ an antibody or antibody fragment that bind an epitope that is a structure or conformation formed during virus entry; and

measuring the amount of antibody ~~binding~~ or antibody fragment binding.

23. (currently amended) The method of claim 22, wherein said measuring the amount of antibody or antibody fragment binding is performed by immunoprecipitation analysis, flow cytometry, fluorescence microscopy, or fluorimetry, an enzyme assay ~~assays~~, radiolabeling or ~~chemiluminescense techniques~~ a chemiluminescense technique.

24. (currently amended) The method of claim 21, wherein said antibody or antibody fragment is ~~the ability of said candidate compound to induce said conformational changes in gp41 is detected by using~~ polyclonal, monoclonal, or a combination thereof, ~~thereof~~ sera raised against peptides, a mixture of peptides, or proteins mimicking gp41 conformational structures induced during HIV entry.

25. (currently amended) The method of claim 24, wherein said ~~conformation~~ conformational structure is the gp41 six-helix bundle structure.

26. (currently amended) The method of claim 24, wherein said antibody or antibody fragment is ~~the ability of said candidate compound to induce said conformational~~

~~changes in gp41 is detected by using~~ polyclonal sera generated by immunizing animals with a 1:1 mixture of the P15 and P16 peptides.

27. (currently amended) The method of claim 24, wherein said antibody or antibody fragment is ~~the ability of said candidate compound to induce said conformational changes in gp41 is detected by using a~~ monoclonal ~~antibody~~.

28. (previously presented)The method of claim 27, wherein said antibody is T26, 17b, 48d, 8F101 or A32.

29. (currently amended) The method of ~~claim 4~~ claim 1, wherein said antibody or antibody fragment is monoclonal.

30. (currently amended) The method of ~~claim 4~~ claim 1, wherein said antibody or antibody fragment is polyclonal.

31. (previously presented) The method of claim 1, wherein said compound has a molecular weight less than 2000 Da.

32. (currently amended) A method for identifying a compound that selectively induces conformational ~~function-impairing~~ changes in viral envelope proteins ~~that result in loss of function by envelope structures necessary for virus entry~~, comprising:

providing a membrane bound viral envelope protein or membrane bound fragment thereof, contacting said ~~membrane bound viral~~ envelope protein or ~~membrane bound~~ fragment thereof with a candidate compound in the absence of the cellular receptor or fragment thereof which induces said conformational change; and

measuring the ability of said candidate compound to induce conformational changes in said ~~membrane bound~~ viral envelope protein or fragment ~~hereof~~ thereof by determining the binding of an antibody, or fragment thereof~~, or peptide~~ to said ~~membrane bound~~ viral envelope protein or fragment thereof.

33. (currently amended) The method of claim 32, further comprising, after said contacting, incubating said ~~membrane bound viral~~ envelope protein or fragment thereof in the presence of one or more cellular receptors or fragments thereof~~, wherein said cellular receptors or fragments thereof do not induce said conformational change~~.

34. (new) The method of claim 21, wherein said compound has a molecular weight less than 2000 Da.

35. (new) The method of claim 32, wherein said compound has a molecular weight less than 2000 Da.